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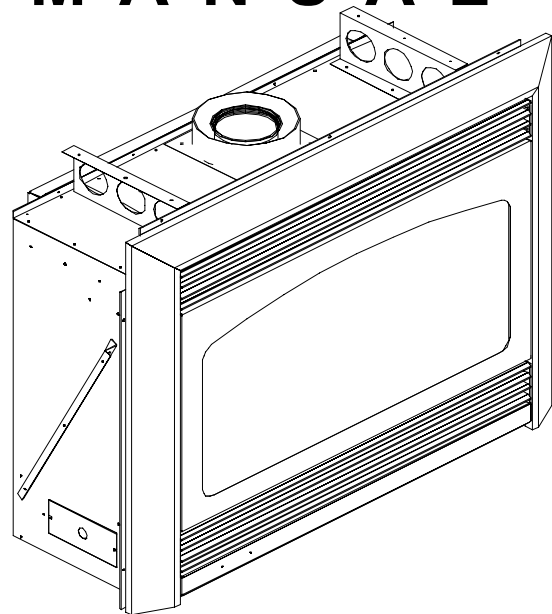
ENVIRO GAS

EG 33 Direct Vent ZERO CLEARANCE

By SHERWOOD INDUSTRIES LTD.

OWNERS MANUAL

WARNOCK HERSEY



This appliance may be installed in an after market permanently located manufactured (mobile) home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used

WHAT TO DO IF YOU SMELL GAS

- Open windows
- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

WARNING

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life. Installation and service must be performed by a qualified installer, service agency or the gas supplier.

FOR YOUR SAFETY

Do not store or use gasoline or other Flammable vapors and liquids in the vicinity of this or any other appliance.

SAFETY PRECAUTIONS

FOR SAFE INSTALLATION AND OPERATION OF YOUR “ENVIROGAS” STOVE, PLEASE, CAREFULLY READ THE FOLLOWING INFORMATION:

GENERAL

Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean. Due to high temperatures the appliance should be located out of high traffic areas and away from furniture and draperies.

Children and adults should be alerted to hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.

- Young children should be carefully supervised when they are in the same room as the appliance.
 - Clothing or other flammable material should not be placed on or near the appliance.
-
- All “ENVIROGAS” gas-fired appliances must be installed in accordance with these instructions. Carefully read all the instructions in this manual first. Consult the building authority having jurisdiction to determine the need for a permit prior to commencing the installation.
 - **NOTE** Failure to follow these instructions could cause a malfunction of the fireplace, which could result in death, serious bodily injury, and/or property damage.
 - Failure to follow these instructions may also void your fire insurance and/or warranty.

FOR YOUR SAFETY:

- Installation and service must be performed by a qualified installer, service agency or the gas supplier.
- Installation must conform to local codes or, in the absence of local codes with the current CAN 1-B 149 installation code in Canada or the current National Fuel Gas Code ANSI Z223.1 in the USA.

- To prevent injuries do not allow anyone who is unfamiliar with the operation to use the stove.
- Always keep the appliance area clear and free of combustible materials, gasoline and other flammable vapors and liquids.
- These appliances should not be used as a drying rack for clothing or for hanging Christmas stockings or decorations.
- Due to the paint curing on the stove a faint odor and slight smoking will likely be noticed when the stove is first used. Open a window until the slight smoking stops. Always connect this gas stove to a chimney and vent to the outside of the building envelope. Never vent to another room or inside a building. Make sure you use the vent pipe that is specified. Make sure that the vent is properly sized and is of adequate height to provide the proper draft. Inspect the venting system annually for blockage and any signs of deterioration.

WARNING: Do not operate with cracked or broken glass. Under no circumstances should this appliance be modified. Parts that have to be removed for servicing must be replaced prior to operating this appliance. Only parts supplied by Envirogas should be used in this appliance and replacement should only be performed by a licensed or qualified service person.

- Never use solid fuels such as wood, paper, cardboard, coal, or any other flammable liquids etc., in this appliance
- Do not use this heater if any part has been under water. Immediately call a qualified service technician to inspect the heater and to replace any part of the control system and any gas control, which has been under water.
- Do not abuse glass by striking or slamming door shut.

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CODE APPROVALS

- This Direct Vent appliance draws all of its combustion air from outside of the dwelling through specially designed vent pipe.
- These appliances have been tested by INTERTEK (ITS)(WH) services and found to comply with the established standards for a DIRECT VENT GAS FIREPLACE in CANADA and the USA as follows:

LISTED GAS FIRED GRAVITY DIRECT VENT WALL FURNACE (EG 33 DV. NAT. & LPG.)
TESTED TO: ANSI Z21.44-1995 (GAS FIRED GRAVITY DIRECT VENT WALL FURNACE), CAN1-2.19-M81 (VENTED GRAVITY DIRECT VENT WALL FURNACE), ANSI Z21.88-1998/CSA 2.33-M98 (VENTED GAS FIREPLACE HEATER) UL 307B-1995 GAS BURNING HEATING APPLIANCES FOR MANUFACTURED HOMES. CGA 2.17-M91 GAS FIRED APPLIANCES FOR USE AT HIGH ALTITUDE.

SPECIFICATIONS:

ENVIROGAS EG 33 DIRECT VENT UNITS;

- Have all been certified for use with either natural or propane gases. (see control panel and rating label.)
- Are not for use with solid fuels.
- Must not be connected to a chimney flue serving a separate solid-fuel burning appliance.
- Are approved for bedroom or bed sitting room.
 - (IN CANADA: must be installed with a listed wall thermostat)
 - (IN USA: see current ANSI Z223.1 for installation instructions.)
- Must be installed in accordance with local codes if any. If none exist use current installation code CAN/CGA b149 in Canada or ANSI Z223.1 / NFPA 54 in the USA.
- Must be properly connected to an approved venting system.
- Manufactured (mobile) home installation must be in accordance with the Manufactured Home Construction and Safety Standard, UL 307B, Title 24 CFR, Part 3280 and/or The Standard for Manufactured Home Installations, ANSI A225.1/NFPA 501A. The unit must be bolted to the floor of the mobile home and must be electrically grounded to the steel chassis.
- Are approved for installation on combustible materials.

PREPARATION FOR INSTALLATION

- Remove the packaging from the appliance, and check to make sure there is no damage. If damage is found, please report it to both the carrier and your dealer as soon as possible.
- Before beginning, carefully check the glass door and the log set

ASSEMBLY:

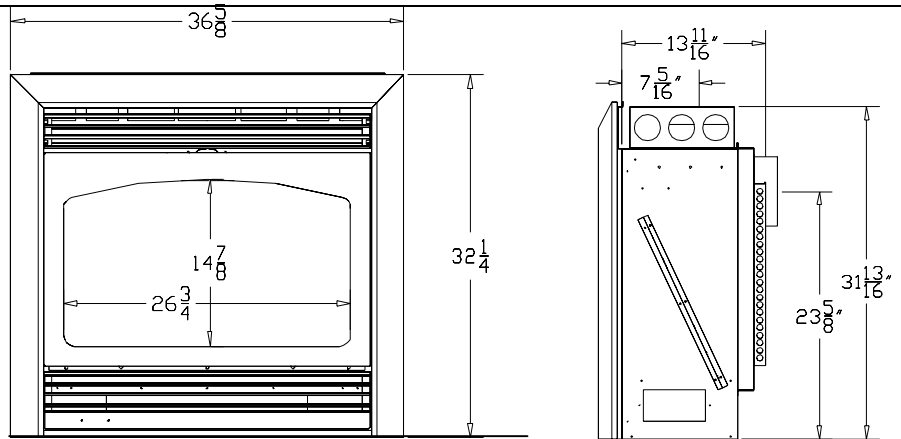
- The stove is now ready to be connected to the gas supply.
- Install the embers (single layer thick, including on top of the burner). Install the logset into the firebox.

DECIDING WHERE TO LOCATE YOUR STOVE

DIMENSIONS:

Front Width: 36 5/8" / 93 cm
 Rear Width: 36 5/8" / 93 cm
 Height: 32 1/4" / 82 cm
 Depth: 13 11/16" / 34.77 cm

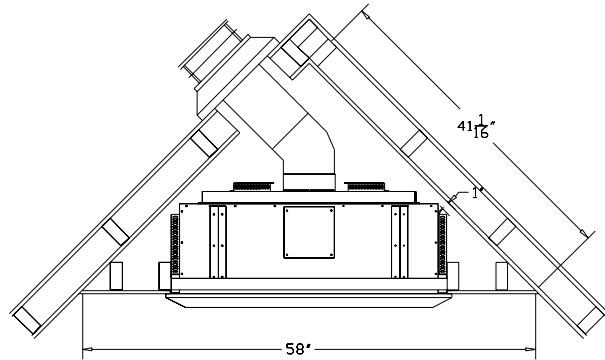
Shipping Weight: 132 lbs/59.9 kg



CLEARANCES:

- | | |
|-----------------------|-------------|
| A. Side wall to stove | 2" / 5 cm |
| B. Rear wall to stove | 1" / 2.5 cm |
| C. Floor to stove | 0" / 0 cm |
| D. Corner clearance | 1" / 2.5 cm |

Maintain sufficient clearances for service and maintenance



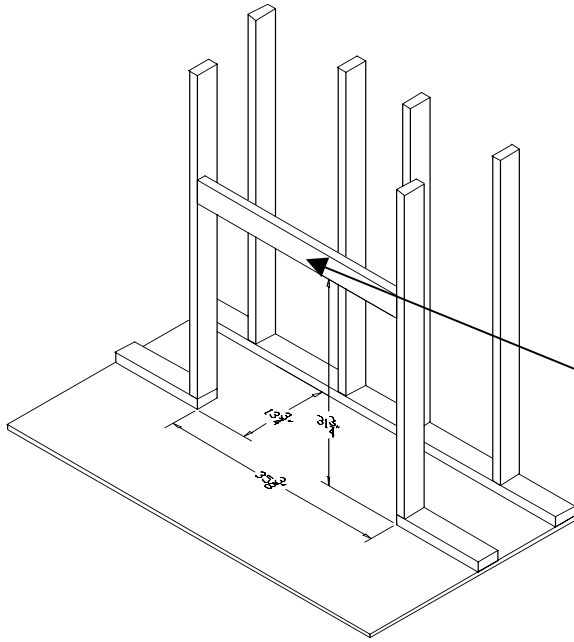
- The stove should be located out of traffic and away from furniture and draperies.
- The stove should have sufficient access for its safe operation and maintenance.
- Locate a position where the flue system of the stove can be properly installed without damaging the integrity of the building. e.g. cutting a wall or ceiling joist.
- The stove can be installed on any wood or concrete surface.
- Check stove and flue system clearance requirements.
- Locate the stove where it can be accessed by a gas supply line.
- Locate the stove in a large and open room that is centrally located in the house. This will optimize heat circulation and comfort.
- As the stove could be equipped with a convection fan, ensure that an electrical source is supplied to the chase that the unit has been installed.
- These stoves can be installed in bedrooms.
 (IN CANADA: must be installed with a listed wall thermostat)
 (IN USA: see current ANSI Z223.1 for installation instructions.)
- The flow of combustion and ventilation air must not be obstructed.

MOBILE HOME

- When the unit is installed in a Mobile Home it must be grounded to the steel chassis or connected to a grounding rod.
- In a Mobile Home installation the unit must be bolted securely to the floor using the holes provided. Manufactured (mobile) home installation must be in accordance with the Manufactured Home Construction and Safety Standard, UL 307B, Title 24 CFR, Part 3280 and/or The Standard for Manufactured Home Installations, ANSI A225.1/NFPA 501A

INSTALLATION:

THIS UNIT HAS BEEN DESIGNED TO BE INSTALLED IN MANY LOCATIONS. BECAUSE THIS UNIT IS A ZERO CLEARANCE FIREPLACE IT MAY BE INSTALLED IN A WOOD FRAMED COMBUSTIBLE CHASE, AS SHOWN.



FRAMING DIMENSIONS:

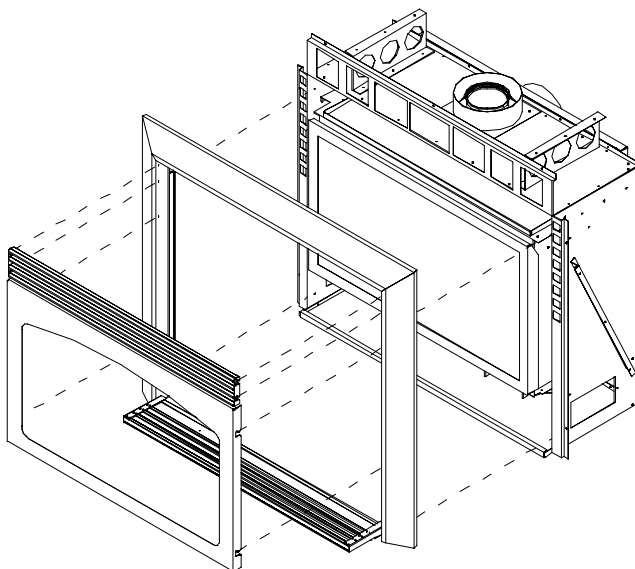
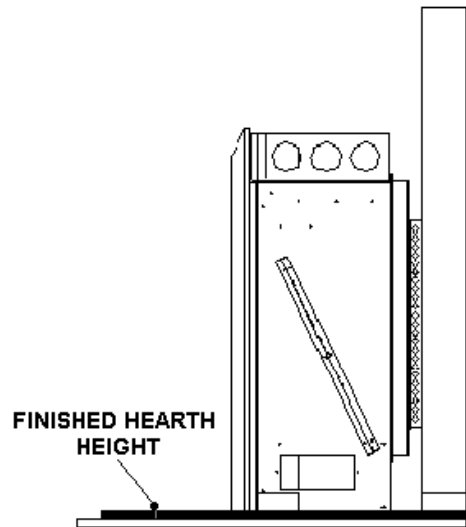
WIDTH: 35 3/8" (89.85 CM)
HEIGHT: 31 3/4" (80.65 CM)
(INCLUDING FINISHED HEARTH HEIGHT)
DEPTH: 13 3/4" (34.93 CM)

NOTE: When preparing framing for this unit insure that the framing on the outside wall or ceiling will not interfere with the vent pipe. Framing must maintain proper clearances to the unit and vent pipe.

NOTE:

Also make sure that the top header above the framing opening is installed on the edge or upright, this will maintain proper clearances to the vent pipe.

NOTE: MAKE SURE THAT THE UNIT HAS BEEN INSTALLED SO THAT THE BOTTOM OF THE UNIT IS INSTALLED AT THE SAME HEIGHT AS THE FINISHED HEARTH HEIGHT. IF THE UNIT IS NOT INSTALLED IN THIS MANNER THE SURROUND WILL NO LONGER FIT ONTO THE UNIT.



Once the framing has been completed remove the unit from its packaging and remove the top louvers and door cover by lifting up on the louvers and door cover and pulling outwards from the unit.

Remove the decorative surround panel from the unit. There are four screws located in the four outer corners just inside the surround panel. (AS SHOWN on next page)

Place the unit into the framed opening. Nail or screw the unit to the framing using the nailing flanges provided. **MAKE SURE THAT THE UNIT IS LEVEL AND PLUMB BEFORE NAILING OR SCREWING TO THE FRAMING MEMBERS. ALSO INSURE THAT THE BOTTOM OF THE UNIT IS LEVEL WITH THE FINISHED HEARTH HEIGHT.**

Once the unit has been secured, install all venting according to local codes and guidelines and restrictions applied in this manual.

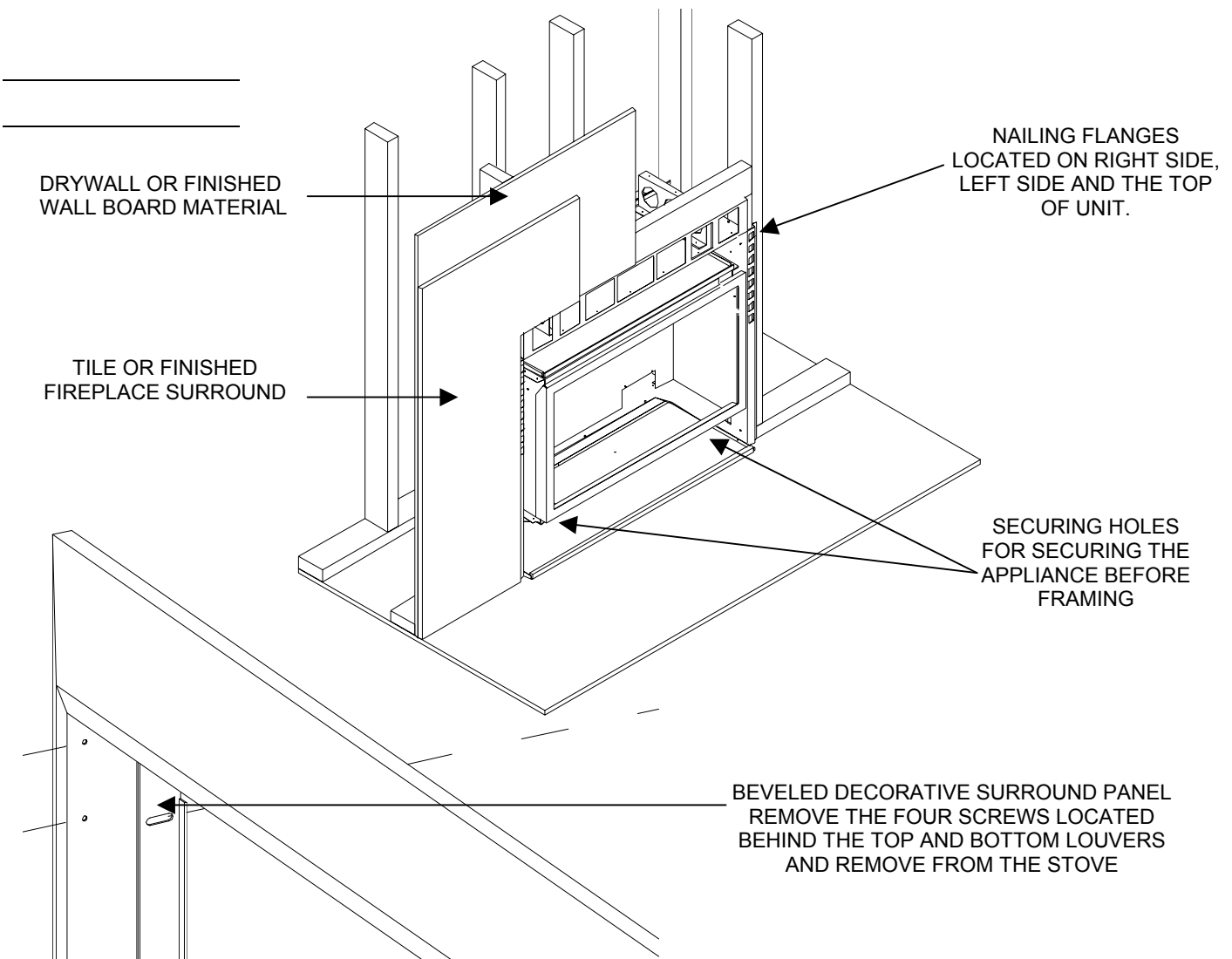
Install gas line from either the right or left side of the unit. Gas lines must be installed to meet local codes for the areas being installed.

Hook up all electrical connections for the convection blower and remote wall switch or thermostat if supplied.

The unit can now be enclosed with the rest of the house finishing. Place a sheet of drywall around the unit covering the nailing flanges and stopping on the unit body. Place the finished tile work or alternate facing material on top of the drywall so that the facing material does not extend past the nailing strip of the appliance.
(see diagram provided)

NOTE: The maximum thickness of any finished facing material around the unit is 1/2" (1.27 cm).

Reinstall logs, glass door, decorative surround panel, door fascia and top louvers

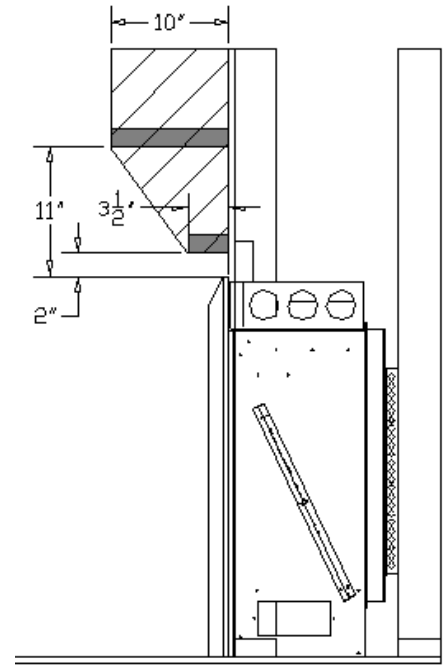


REQUIRED MANTLE CLEARANCES

MAKE SURE THAT THE MANTLE INSTALLATION STAYS WITHIN THE SHADED AREA IN THE DIAGRAM PROVIDED.

THE MAXIMUM ALLOWABLE MANTLE WIDTH IS 10" (25.4 CM)

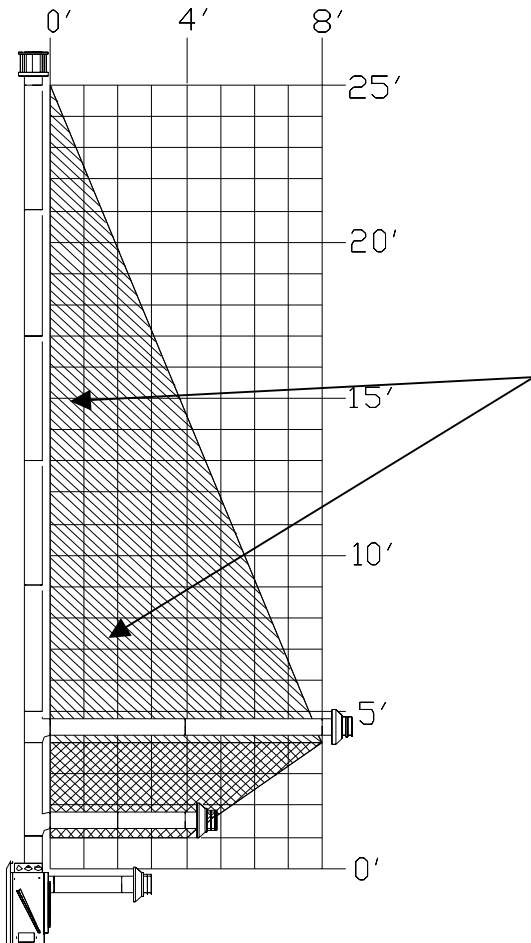
THE MINIMUM HEIGHT FROM THE TOP OF THE SURROUND PANEL TO A 10" (25.4 CM) WIDE MANTLE IS 11" (27.94 CM)



VENT RESTRICTIONS:

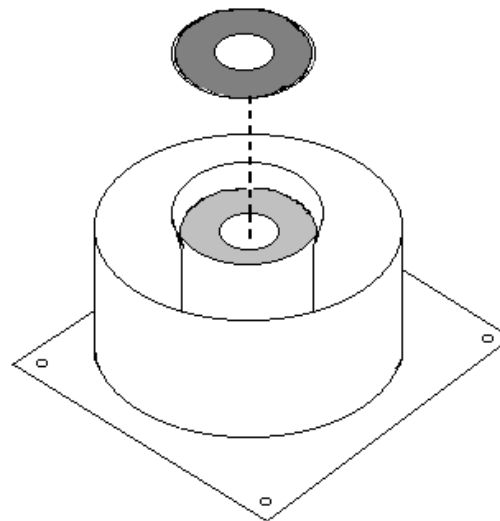
THIS SECTION IS DESIGNED TO SHOW THE MINIMUM AND MAXIMUM VENT LENGTHS FOR BOTH HORIZONTAL AND VERTICAL INSTALLATIONS

WHEN VENTING THIS APPLIANCE YOU MUST STAY WITHIN THE SHADED AREA (see venting chart provided) FOR ALL VENTING APPLICATIONS.



VENT RESTRICTOR RING: A vent restrictor ring is supplied with each direct vent fireplace. This restrictor ring is to be installed when the vertical chimney installation is over 4' (1.21 M). Before the chimney is placed onto the stove, place this vent restrictor ring into the 4" (10.16 CM) flue pipe (as shown), once the vent restrictor ring has been installed, the vertical sections of chimney can be installed.

NOTE: This shaded area designates the need for a vent restrictor ring.



Insert restrictor ring in the 4" (10.16 cm) flue pipe

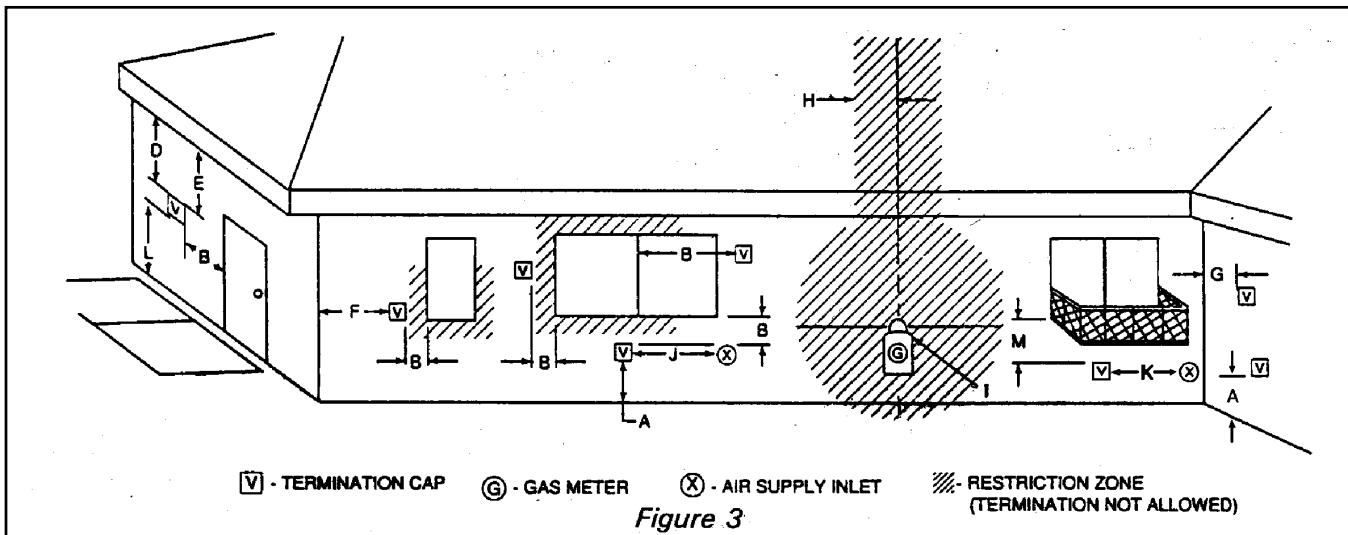
FLUE COLLAR INSTALLATION

THIS UNIT CAN BE VENTED THREE DIFFERENT WAYS: (HORIZONTAL, VERTICAL/HORIZONTAL OR VERTICALLY)

The flue collar has been installed on the rear of the appliance at the factory. It can used in this location or the flue collar can be installed on the top of the firebox for vertical installations.

1. Remove the 6 5/8" outer flue collar taking extra special care not damage the ceramic fiber gasketing material that has been glued to this component.
2. Remove the 4" inner flue pipe taking extra special can not to damage the ceramic gasketing material that has been glued to this component.
3. Remove the two cover plates from the top of the appliance. These cover plates will be installed to cover the inner and outer flue connections on the back of the appliance. Make sure that the ceramic fiber gasket has not been damaged to insure an airtight seal.
4. Reinstall both 6 5/8" and 4" flue collars in the desired location insuring the ceramic fiber gasket has not been damaged to create an air tight seal.

VENT TERMINAL CLEARANCES



- A= Clearance above grade, verandah, porch, deck, or balcony [*12 inches (30 cm) minimum]
- B= Clearance to window or door that may be opened [*12 inches (30 cm) minimum]
- C= Clearance to permanently closed window [minimum 12 inches (30 cm) recommended to prevent condensation on window]
- D= Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the center-line of the terminal (24 inches (60 cm) minimum)
- E= Clearance to unventilated soffit [18 inches (45 cm) minimum]
- F= Clearance to outside corner [12 inches minimum]
- G= Clearance to inside corner [12 inches minimum]

- H= *Not to be installed above a meter/regulator assembly within 3 feet (90 cm) horizontally from the center-line of the regulator
- I= Clearance to service regulator vent outlet [*6 feet (1.8m) minimum]
- J= Clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance [12 inches (30 cm) minimum]
- K= Clearance to a mechanical air supply inlet [*6 feet (1.8m) minimum]
- L=*** Clearance above paved side-walk or paved driveway located on public property [*7 feet (2.1m) minimum]
- M= Clearance under verandah, porch, deck, or balcony [*24 inches (60 cm) minimum **]

*** A vent shall not terminate directly above a sidewalk or paved driveway, which is located between two single family dwellings and serves both dwelling

** **Only permitted if verandah, Porch, deck, or balcony is fully open on a minimum of 2 sides beneath the floor**

- As specified in CGA B149 Installation Codes (1991) Note: Local Codes or Regulations may require different clearances

These models have been tested and certified for use with SIMPSON DURAVENT DIRECT VENT TYPE "GS" PIPE FOR GAS STOVES. Kits are available for vertical venting or horizontal venting. It is recommended that a bead of RTV High Temperature Silicone be applied to each outer vent joint and MILPAC to each inner joint before installation.

BEFORE BEGINNING THE INSTALLATION TAKE CARE TO ENSURE AN APPROPRIATE OUTSIDE LOCATION FOR THE VENT TERMINATION CAN BE ACCOMMODATED. **FOLLOW THE VENT LENGTH DIAGRAM PRECISELY.**

VENTING TERMINALS CANNOT BE RECESSED INTO A WALL OR SIDING.

If extra elbows are being used, overall allowable length will be reduced by 3 ft. per additional elbow

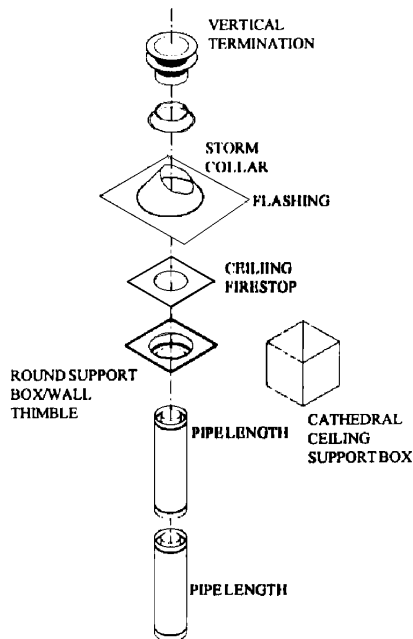
Simpson DuraVent Parts

Number	Description	Number	Description
908B	6" Pipe Length, Black	943S	Flashing, 7/12 to 12/12 Roof Pitch
907B	9" Pipe Length, Black	953	Storm Collar
906 (B)	12" Pipe Length, (Black)	963	Ceiling Firestop
904 (B)	24" Pipe Length, (Black)	988	Wall Strap
903 (B)	36" Pipe Length, (Black)	984	Horizontal Square Termination
902 (B)	48" Pipe Length, (Black)	985	High Wind Horizontal Termination
911 (B)	11" to 14-5/8" Pipe , Adjustable, Black	980	Vertical Termination
945 (B)	45° Elbow, (Black)	991	High Wind Vertical Termination
990 (B)	90° Elbow, (Black)	950	Vinyl Siding Standoff
940	Round Support / Wall Thimble Cover	942	Wall Thimble
941	Cathedral Ceiling Support Box	971	Horizontal Termination Kit A
943	Flashing, 0/12 to 6/12 Roof Pitch		Add suffix (B) for optional black parts as listed.

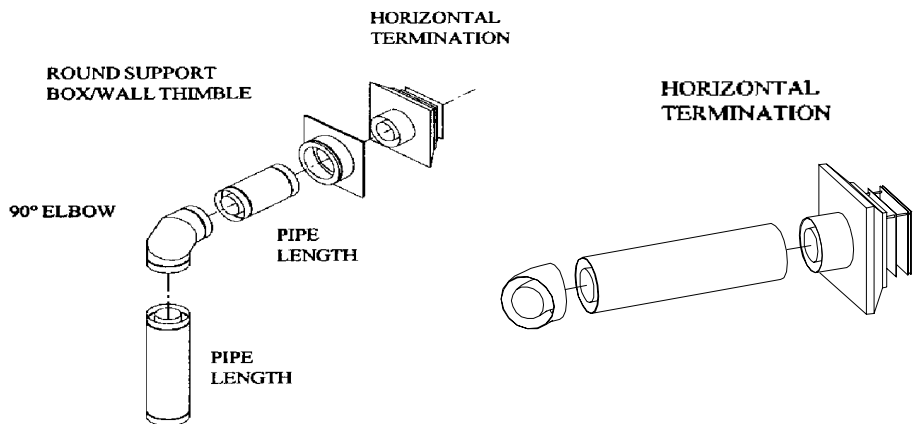
PLANNING YOUR INSTALLATION

There are three basic types of Direct Vent System installations. The three types of installations are:

Vertical Termination



Horizontal Termination



When planning your installation, it will be necessary to select the proper length of vent pipe for your particular requirements. It is important to note when passing through a wall, the maximum allowable wall thickness is 10-inches (254 mm), 1 1/2" inches clearance to combustibles must be maintained. Select the amount of vertical rise desired for "vertical-to-horizontal" type installations. To determine the length of vent pipe required for vertical installations, measure the distance from the appliance flue outlet to the ceiling, the ceiling thickness, the vertical rise through the attic or second story, and allow for sufficient vent height above the roofline. For two story applications, A firestop is required at each floor level. If an offset is needed in the attic, additional pipe and elbows will be required. To connect the venting system to the appliance flue outlet, a twist-lock adapter is built into the appliance at the factory.

HORIZONTAL INSTALLATION

STEP 1. Set the appliance in the desired location. Check to determine if wall studs or roof rafters are in the way when the venting system is attached. If this is the case, you may want to adjust the location of the appliance.

STEP 2. Direct vent pipe and fittings are designed with special twist-lock connections. Assemble the desired combination of the pipe and elbows to the appliance adapter with pipe seams oriented towards the wall or floor, as much out of view as possible.

Place a bead of Mil-Pac on the outer edge of the inner exhaust pipe (non-flared end). Place a bead of high temperature silicone on the male edge of the outer pipe. Push the pipe sections completely together, then twist-lock one section clockwise approximately one-quarter turn, until the two sections are fully locked. The female locking lugs will not be visible from the outside, on the pipe. They may be located by examining the inside of the female ends as shown in FIG-10.

NOTE:

(1) Twist-lock procedure: four indentations, located on the female end of the pipes and fittings, are designed to slide straight onto the male ends of adjacent pipes and fittings, by orienting the four pipe indentations so they match and slide into the four entry slots on the male end.

(2) Horizontal runs of vent pipe must be supported every three feet (3'). Wall straps are available for this purpose.

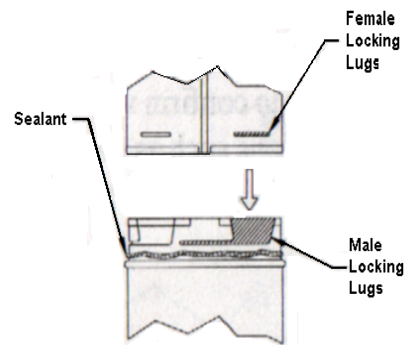


FIG. 10

STEP 3. With the pipe attached to the stove into the correct location, mark the wall for a 10 inch x 10 inch square hole. The center of the square hole should match the centerline of the horizontal pipe. Cut and frame the 10-inch x 10-inch hole in the exterior wall where the vent will be terminated. If the wall being penetrated is constructed of non-combustible material *i.e.* masonry or concrete, a 7-inch hole is acceptable.

STEP 4. Position the horizontal vent termination in the center of the 10-inch square hole, and attach to the exterior wall with the four screws provided. Before attaching the Vent Termination to the exterior wall, run a bead of non-hardening mastic around the edges, so as to make a seal between the termination and the wall. The arrow on the vent termination should be pointing up, insure that the proper clearances to combustible materials are maintained.

STEP 5. Slide the appliance and vent assembly towards the wall, carefully inserting the vent pipe into the cap assembly. It is important that the vent pipe extend into the vent cap a sufficient distance with a minimum of 1 1/4" inch overlap. Secure the connection between the vent cap pipe and the vent cap by attaching the two sheet metal straps extending from the vent cap assembly into the outer wall of the vent pipe. Use the two sheet metal screws provided to connect the straps to the vent pipe. Bend any remaining portion of the sheet metal straps back towards the vent cap, so the decorative wall thimble FIG-13 will conceal it.

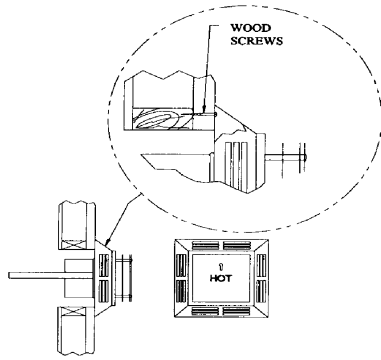


FIG-11

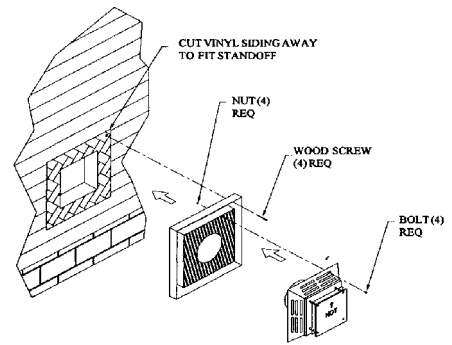


FIG-12

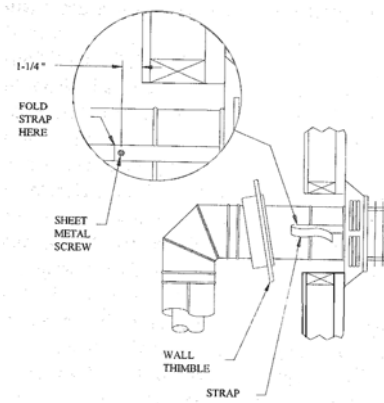


FIG-13

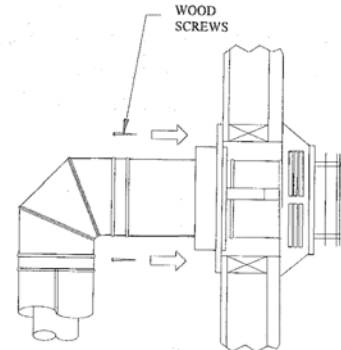


FIG-14

NOTES: (1) The four wood screws provided should be replaced with the appropriate fasteners for stucco, brick, concrete, or other types of siding.

(2) For buildings with vinyl siding, a vinyl siding standoff (950), should be installed between the vent cap and the exterior wall FIG-12. Attach the vinyl siding standoff to the horizontal termination. The vinyl siding standoff prevents excessive heat from possibly melting the vinyl siding material. Note that the horizontal vent termination bolts onto the flat portion of the vinyl siding standoff. (shaded area in FIG-12), so that an air space will exist between the wall and the vent termination.

NOTES: (1) The horizontal run of vent pipe must be level and should have a 1/4" inch rise for every one foot of run towards the termination. **NEVER ALLOW THE VENT TO RUN DOWNWARD.** This could cause high temperature and may present the possibility of a fire

(2) The location of the horizontal vent termination on the exterior wall must not be easily blocked or obstructed. Termination clearances are as follows: (SEE PAGE 8 IN THIS MANUAL)

(3) When installing a vent pipe in an enclosed chase the minimum clearance to combustibles is 4" inches (100 mm).

VERTICAL INSTALLATION

- STEP 1.** Check the instructions for required clearances (air spaces) to combustibles when passing through ceilings, walls, roofs, enclosures, attic rafters, or other nearby combustible surfaces. Do not pack air spaces with insulation.
- STEP 2.** Set the gas appliance in the desired location. Drop a plumb bob down from the ceiling to the position of the appliance flue exit, and mark the location where the vent will penetrate the ceiling. Drill a small hole at this point. Next, drop a plumb bob from the roof to the hole previously drilled in the ceiling, mark the spot where the vent will penetrate the roof. Determine if ceiling joists, roof rafters, or other framing will obstruct the venting system. You may wish to relocate the appliance, or to offset, to avoid cutting load bearing members.
- STEP 3.** To install the Round Support Box/Wall Thimble in a flat ceiling, cut a 10- inch square hole in the ceiling, centered in the hole drilled in Step 2. Frame the hole as shown in FIG-16.
- STEP 4.** Assemble the desired lengths of black pipe and elbows necessary to reach from the appliance adapter up through the Round Support Box. Insure that all pipe and elbow connections are in their fully twist-locked position.
- STEP 5.** Cut hole in the roof centered on the small hole placed in the roof from Step 2. The hole should be of sufficient size to meet minimum requirements for Clearance to Combustibles, as specified. Continue to assemble lengths of pipe and elbows necessary to reach from the ceiling Support Box up through the roofline. Galvanized pipe and elbows may be utilized in the attic, as well as above the roofline. The galvanized finish is desirable above the roofline, due to the higher corrosion resistance.
- STEP 6.** Once the pipe sections have been joined, and run up through the hole in the roof, slip an elbow strap (Part-989) over the exposed sections, bend the support straps outwards, and push the Elbow Strap down to the roof level, as shown in FIG 17. Tighten the clamp around the Pipe section. Use a level to make sure the pipe is truly vertical. With roofing nails, secure the support straps to the roof. Seal the nails holes heads with non-hardening mastic. Trim the excess length of the support straps that extend out beyond the edge of the flashing.
- STEP 7.** Slip the flashing over the pipe section protruding through the roof. Secure the base of the flashing to the roof with roofing nails. Use a non-hardening sealant between the uphill edge of the flashing and the roof. Insure the roofing material overlaps the top edge of the flashing as shown in FIG 17. Verify that you have at least the minimum clearance to combustibles at the roofline.
- STEP 8.** Continue to add pipe sections until the height of the vent cap meets the minimum code requirements. FIG 22. Note that for steep roof pitches, the vent height must be increased. In high wind conditions, nearby trees, adjoining roof lines, steep pitched roofs, and other similar factors can result in poor draft, or down drafting. In these cases, increasing the vent height may solve the problem.
- STEP 9.** Slip the Storm Collar over the pipe, and push it down to the top of the roof flashing as shown in FIG 17. Use the non-hardening sealant around the joint between the pipe and the Storm Collar.
- STEP 10.** Twist lock the vent cap.

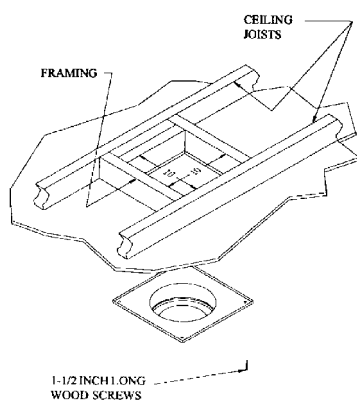


FIG-16

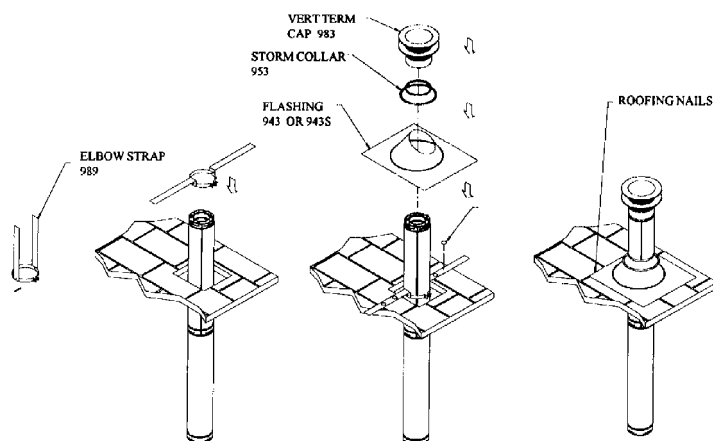


FIG-17

NOTES:

- (1) If an offset is necessary in the attic to avoid obstructions, it is important to support the vent pipe every 3 feet, to avoid excessive stress on the elbows, and possible separation. Wall straps are available for this purpose. FIG-18
- (2) When ever possible, use 45° degree elbows instead of 90° degree elbows. The 45° degree elbow offers less restriction to the flow of flue gases and intake air.

NOTES:

- (1) For multi story installations. A ceiling firestop (part 963) is required at the second floor, and any subsequent floors. FIG-19. The opening should be framed to 10-inch x 10-inch inside dimensions, in the same manner as shown in FIG-16.
- (2) Any occupied areas above the first floor, including closets and storage spaces, which the vertical vent passes through, must be enclosed. The enclosure may be framed and sheetrocked with standard building materials. However consult the appliance manufactures installation instructions for the minimum allowable clearance between the outside of the vent pipe, and the combustibile surfaces of the enclosure. Do not fill any required air spaces with insulation.

FIG. 18

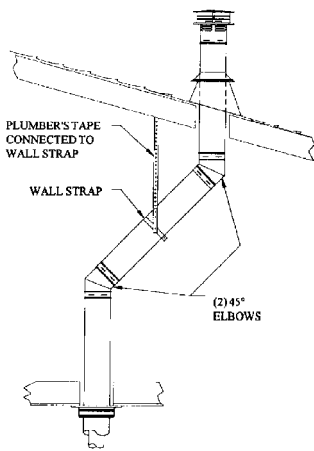


FIG. 19

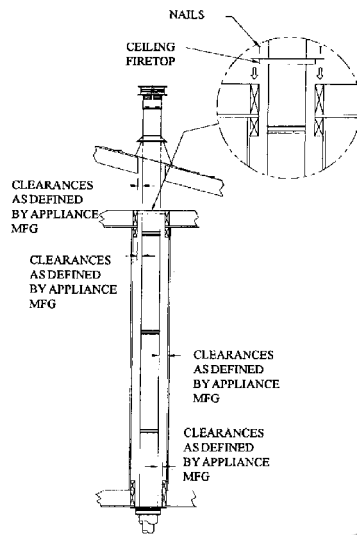


FIG. 20

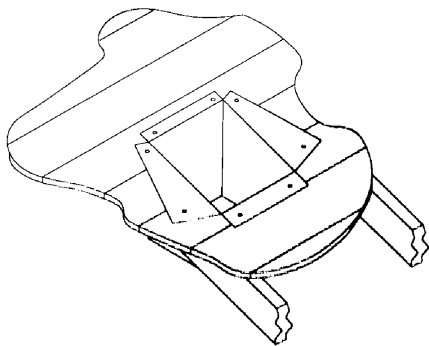
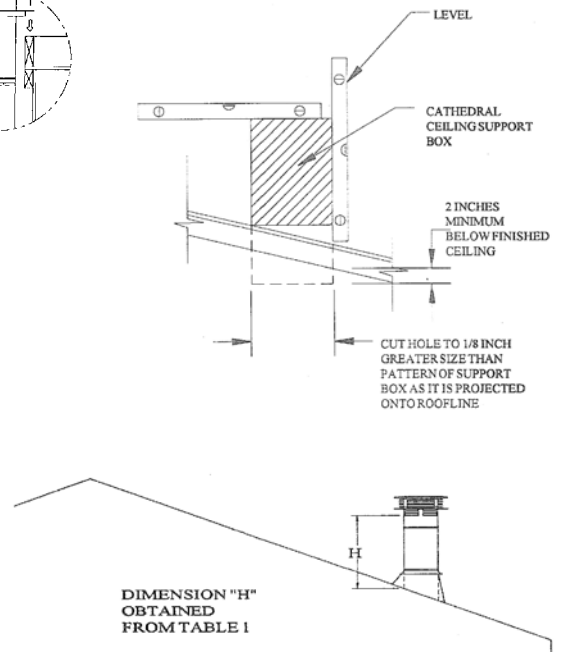


FIG-21

ROOF PITCH	TABLE I MINIMUM HEIGHT	
	FEET	METERS
FLAT TO 7/12	1	0.3
OVER 7/12 TO 8/12	1.5	0.46
OVER 8/12 TO 9/12	2	0.61
OVER 9/12 TO 10/12	2.5	0.76
OVER 10/12 TO 11/12	3.25	0.99
OVER 11/12 TO 12/12	4	1.22
OVER 12/12 TO 14/12	5	1.52
OVER 14/12 TO 16/12	6	1.83
OVER 16/12 TO 18/12	7	2.13
OVER 18/12 TO 20/12	7.5	2.29
OVER 20/12 TO 21/12	8	2.44

FIG-22

INSTALLATION OF LOGSET and EMBERS

INSTALLING THE GLOWING EMBERS and LOGSET

A bag of ceramic fiber embers is provided for use on the front burner ember tray.

CAUTION: Use only the type of ember material supplied with this appliance. Due to the irregular size of the ember material there may be more than required. Use only a single layer. Do not pile embers. The use of other foreign materials on the burners may create dangerous conditions.

If over time, through cleaning and servicing, these embers require replacement, contact your nearest ENVIROGAS dealer for replacement embers.

1. Carefully remove log from unit. Check to ensure there is no damage. It is very important to install this log in its proper position to insure safe, optimum operating conditions.
2. Place the log set into the firebox with the burnt area forward. Locate the log by seating it down onto the burner tray supports
3. Gently remove the ember material from the plastic bag. Spread a single layer loosely across the rear ember tray. Do not allow any embers to rest against pilot assembly.



4. Spread ember pieces in a single layer evenly across the front burner ember tray, Place a single layer of embers on top of the front burner.
5. Carefully avoid any clumping or large build-ups. Do not pack down, leave embers loose
6. Upon the first light up, watch for ignition to **all** burner ports. If a long delay is noted:

First, wait for the appliance to cool down

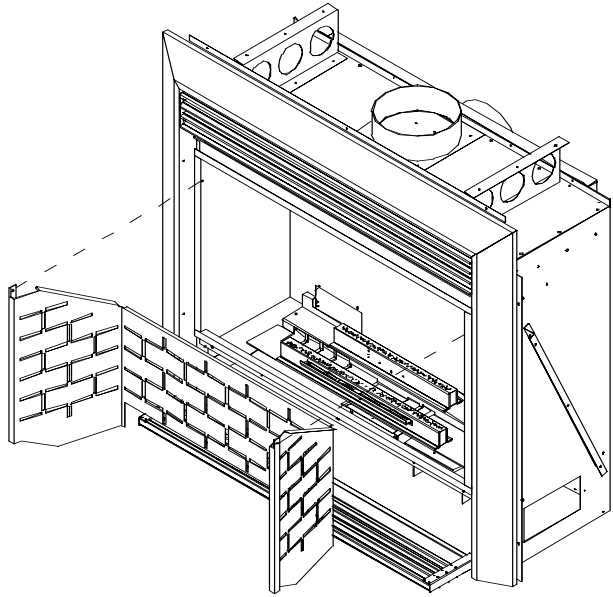
- Open the front door of the appliance.
- Check to carefully reposition the embers making sure that burner ports are not plugged solid or blocked

CAUTION: NEVER OPERATE THIS APPLIANCE WITH THE DOOR REMOVED

REMOVING AND INSTALLING THE BRICK PANELS

Open the door. Remove the log set.

STEEL PANEL: Undo the two screws located in the top two corners of the firebox. Tilt forward at top corners and pull out. Installation is the reverse.

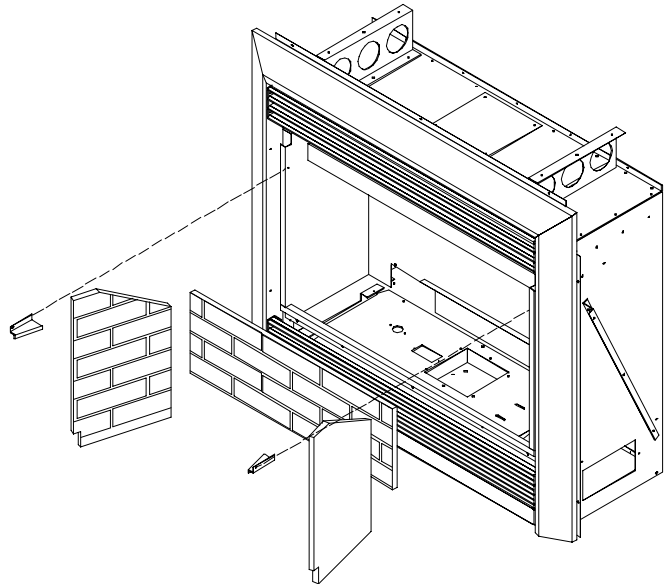


OPTIONAL CERAMIC PANELS

Remove the burner top from the firebox, this will prevent possible damage to the ceramic panels.

Place the back panel on the rear support ledge making sure that the panel is centered on the back of the firebox.

Install side panels into firebox insuring that the rear edge of the side panel supports the rear panel from falling forward. Install the two retaining clips (one on each side) in the front upper corner in the holes provided.



OPERATING INSTRUCTIONS

FOR YOUR SAFETY READ BEFORE OPERATING

WARNING: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.

- A) This appliance is equipped with a pilot, which must be lit by hand by following these instructions exactly.
- B) BEFORE LIGHTING smell all around the appliance area for gas, and next to the floor because some gas is heavier than air and will settle on the floor.


WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.

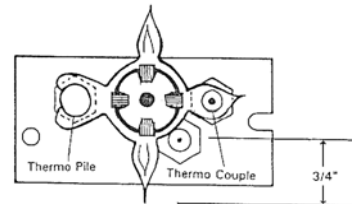
- If you cannot reach your gas supplier, call the fire department.

- C) Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, do not try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D) Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water


LIGHTING INSTRUCTIONS

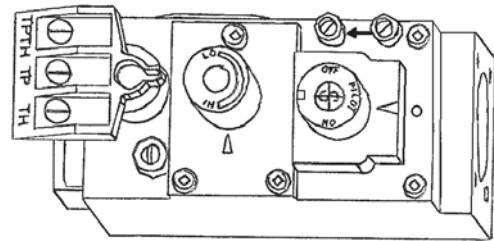
1. STOP! Read the safety information above.
2. Turn off all electrical power to the appliance.
3. Turn the gas control knob clockwise to the "off" position. 
4. Open door. **Wait five (5) minutes to clear out any gas.** Close door. If you smell gas including near the floor, **STOP!** Follow "B" in the above safety information.

If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call you service technician or gas supplier.



If you don't smell gas go to next step.

5. Find the pilot located to the right between the front and rear burner.
6. Turn gas control knob counter-clockwise to "PILOT". 
7. Push the gas control knob in fully and hold. Immediately light the pilot by pushing the piezo spark igniter. Keep knob depressed for about 30 seconds after pilot is lit. Release knob. If pilot goes out, repeat steps 4 through 6.



HI \ LO knob Control knob

WARNING The gas valve has a lockout device, which will not allow the pilot burner to be re-lit until the knob does not pop up when released, stop and immediately call your service technician or gas supplier.

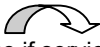
NOTE: Check to be sure the pilot flame engulfs the thermocouple and that the burners light completely.

8. Turn gas control knob counter-clockwise to the "ON" position.

Flip burner switch to "ON" then turn "HI / LO" knob to the desired setting.

9. Turn on all electrical power to the unit thermocouple, has cooled.

TO TURN OFF GAS TO APPLIANCE

1. Turn the gas control knob clockwise to  "OFF" DO NOT FORCE
2. Turn off all electrical power to the appliance if service is to be performed.
3. Flip burner switch to off.

ROUTINE MAINTENANCE and TECHNICAL

Periodically check to ensure that your system is clean.

Periodically check the pilot and burner. Check to see that all the burner ports are clean and clear. Check the pilot head for blockage. Check to ensure the pilot flame is blue with no yellow tips.

OPENING THE DOOR

Turn unit off and wait until the appliance has cooled down. Open the lower louver panel. Undo the three bolts at the bottom corners and center of the door. Swing door out, then lift up and out to remove.

Ensure the door is properly fastened after cleaning before attempting to re-light the appliance.

CLEANING THE GLASS

DO NOT CLEAN GLASS WHEN HOT

It will be necessary to clean the ceramic glass periodically. During a cold start up, condensation will sometimes form on the glass, this is a normal condition with all gas fireplaces and stoves. However, this condensation can allow dust and lint to cling to the glass surface. Initial paint curing of the appliance can leave behind a slight film on the glass. This is a temporary problem. It is therefore recommended that the glass be cleaned initially after about the first two weeks of use.

To clean the door use a mild glass cleaner and a soft cloth. Abrasive cleaners will damage the glass and gold surfaces.

TO REPLACE DOOR GLASS

The glass in this appliance is ceramic. If the glass is damaged or broken a factory replacement must be fitted.

TO REPLACE:

- Open door, remove the glass carefully.
- Install the new piece of glass with the large bulb in the gasket tape against the unit. Place the joint in the tape in a bottom corner. Close door

Glass must be purchased from an Envirogas dealer. No substitute materials are allowed.

CLEANING THE INSIDE OF THE FIREBOX

Remove the log carefully from the firebox. Gently remove the embers and place on a piece of paper towel. Until ready to replace.

Vacuum the bottom of the firebox thoroughly. Carefully clean off any dust on the logs and brick panels and remove any lint from the main burner and pilot burner.

After carefully replacing the log and embers in their correct positions, and the door has been resealed, re-light the pilot, following the instructions on the attached label.

CLEARANCES MUST BE SUFFICIENT TO ALLOW ACCESS FOR MAINTENANCE AND SERVICE

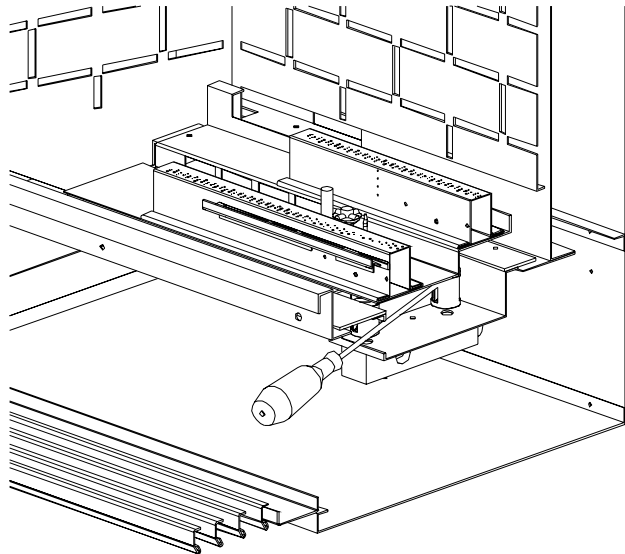
Depending upon the amount of use, cleaning should be required no more than two or three times per season.

REMOVING BURNER CONTROLS:

1. Shut of gas supply to appliance.
2. Disconnect gas line from the valve.
3. Open the door and remove the log. Remove the burner tray assembly by removing the two screws on either side of the tray. Pull tray up at the back, lift tray out and towards the front.
4. Remove the brick panel as per instructions. Undo the (6) six screws that hold the burner control tray onto the base of the unit. Lift the control tray, up on the left side and pull out.
5. Installation is the reverse

CAUTION:

Bleed lines before lighting and light pilot with door open



ADJUSTING VENTURI AIR SETTINGS

There is a separate venturi air shutter for each burner The venturis have been set for installation at sea level.

To adjust for high altitude: open the lower louvers, Locate the venturis between the burner and control trays. Loosen the 2 set screws with a long screwdriver and rotate the air shutters to the correct setting.

TROUBLE SHOOTING

Problem	Possible Cause	Solution
Spark will not light the pilot after repeated pressing of spark igniter	Defective piezo igniter	Check connections to igniter -If igniter connections are good but there is no spark-replace igniter
	Broken spark electrode	-Check for broken ceramic insulation replace, electrode if broken
	Miss-aligned spark electrode	-If spark is not arcing from the electrode to pilot- adjust by loosening screws on pilot base. Adjust and re-tighten
Pilot will not remain lit	Problem with thermocouple circuit	-Check for proper connection of thermocouple to rear of valve. If loose, tighten lightly -Check pilot for full flame impingement around thermocouple. If the pilot is too small - Check gas pressure, adjust pilot rate screw, check pilot head for blockage. -Check thermocouple voltage at valve- must be greater than 5 mV. If low, replace thermocouple.
	Air in gas line - (Pilot flame dies while knob is depressed.)	-Bleed line. -Check gas line pressure. -Contact dealer.
Burners will not remain lit	Problem with thermopile circuit	-Check gas line pressure. -Check for flame impingement on thermopile, if low see "Pilot will not stay lit" -Check thermopile for a Minimum of 220 mV when burner switched on. -Check wiring to thermostat for breaks.
Flame lifting	Leak in vent pipe Improper vent configuration Terminal may be recirculating flue gases	-Check for leaks in vent connections -Check vent configuration with manual -Check to see if terminal is on correctly -May need to install high wind termination cap -Contact dealer.
Glass fogs up	Normal conditions - after the appliance warms up glass will clear ** Due to additives in gas, glass may get hazy during normal use** Clean when needed.	
Blue flames	Normal during start - flame will yellow as the appliance heats up.	
Flames are burning "dirty" or Sooting	Flame impingement	-Check log position -Increase primary air by opening venturi shutters See also "Burners will not stay lit"

GAS LINE CONNECTION

WARNING: Only persons licensed to work with gas piping may make the necessary gas connections to this appliance.

GAS LINE CONNECTION

- This stove is equipped with a 3/8" female NPT thread located on the right hand side of the gas valve. Consult your local authorities codes or the CAN/CGA B 149 (1 or 2) installation code in Canada, or in the USA gas installations follow either local codes or the current edition of the National Fuel Gas Code ANSI Z223.1.
- The efficiency rating of this appliance is a product thermal efficiency rating determined under continuous operating conditions and was determined independently of any installed system.

The gas line can be brought into the unit from either the left or the right side of the appliance. It is more convenient to bring the gas line in from the right side as this will allow optional fan installation and service if required.

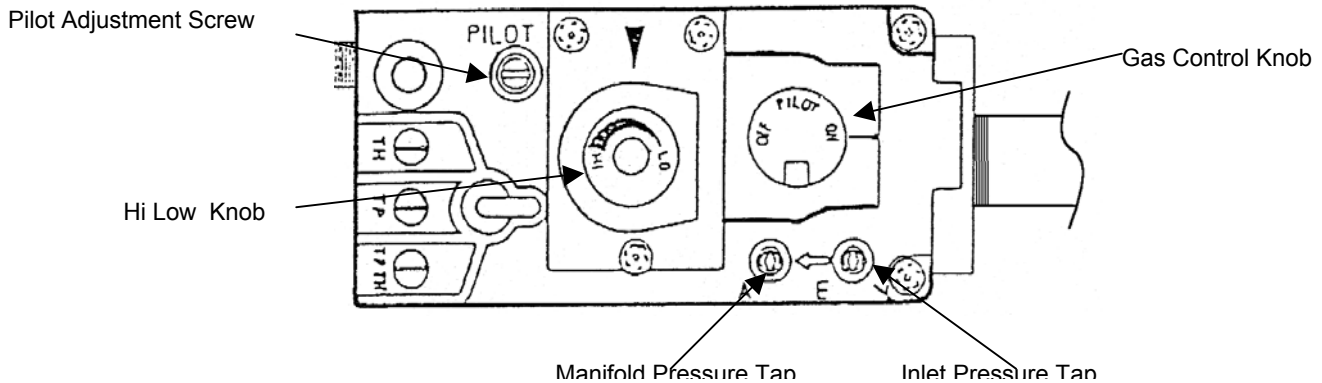
- The appliance and its shutoff valves must be disconnected from the gas supply piping system during any pressure testing where the pressure exceeds 1/2 PSIG (3.45 kpa) or damage will occur to the valve.

The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).

Always check for gas leaks with a soap and water solution after completing the required pressure test.

TO TEST VALVE PRESSURES

- The pressure taps are located on the left side of the valve
- Turn set screw 1 turn counter clockwise to loosen,.
- Place 5/16" (8 mm) I.D. hose over pressure tap system.
- Check pressures using a manometer.
- When finished, release pressure, remove hose & tighten set screw.



ORIFICE SIZES, PRESSURES AND BTU'S

ALL MODELS ARE EQUIPPED WITH A VARIABLE OUTPUT GAS CONTROL.

	NATURAL	PROPANE
FRONT BURNER:	#48 DMS	#56 DMS
REAR BURNER:	#50 DMS	#57 DMS
Manifold Press:	3.8" wc / 0.95 kpa	11.0" wc / 2.74 kpa
Min. Manifold Press:	1.1" wc / 0.27 kpa	2.7" wc / 0.67 kpa
Max. Supply Press:	7.0" wc / 1.74 kpa	12.0" wc / 2.98 kpa
Min. Supply Press:	5.0" wc / 1.25 kpa	11.5" wc / 2.86 kpa
Max. BTUH Input:	30,000 Btu/h/ 8.8 KW	30,000 Btu/h/ 8.8 KW
Min. BTUH Input:	15,000 Btu/h/ 4.39 KW	15,000 Btu/h/ 4.39 KW
Output	Fan on, 22,050 Btu/h/ 6.46 KW Fan off, 21450 Btu/h/.6.28 KW	Fan on, 22,350 Btu/h/ 6.55 KW Fan off, 21750 Btu/h/ 6.37 KW

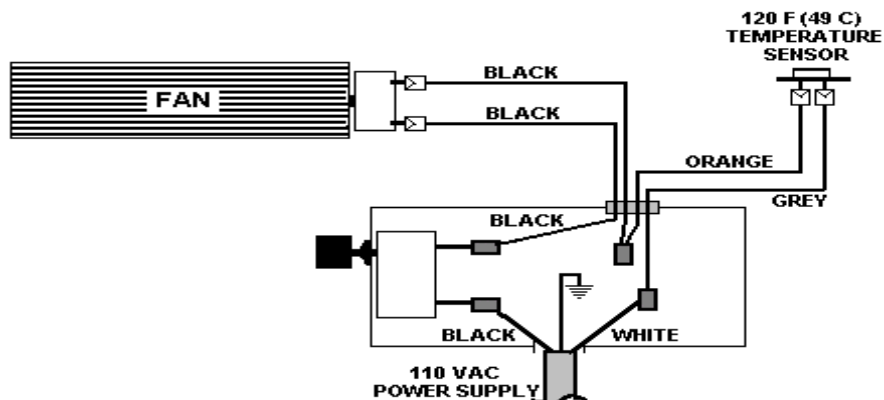
NEVER USE AN OPEN FLAME FOR LEAK TESTING

ELECTRICAL

The **ENVIROGAS EG 22.Z/CLEARANCE .DV.** will operate with no external power supply. These models have a Millivolt gas control which uses the pilot flame to generate enough electricity to operate the main burner.

The appliance when installed, must be electrically connected and grounded in accordance with local codes or in the absence of local codes, with the current CSA C22.1 CANADIAN ELECTRICAL CODE. Part 1, SAFETY STANDARDS FOR ELECTRICAL INSTALLATIONS, or THE NATIONAL ELECTRICAL CODE ANSI / NFPA 70 in the USA.

- Operation of the fan increases the efficiency and the heat output of the appliance.



CAUTION
Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

WARNING: ELECTRICAL GROUNDING INSTRUCTIONS.

For your protection against electrical shock, this unit should be properly grounded.

INSTALLING OR REMOVING THE BLOWER

The blower does not require lubrication.

1. Turn the unit off and make sure the unit is cool before you start to install the fan assembly.
2. Open the bottom louver assembly to access gas control compartment.
3. Place the blower assembly already installed on the fan-mounting bracket, in the center, rear of the appliance. Place blower over the two screws provided on the base of the appliance.
4. Install the electrical box on either the left side of the appliance. This electrical box will have the fan controller already installed on the box.
5. Wire the blower and fan controller to the wiring diagram supplied on this page. (Page 19)
6. This unit must be hard wired to household wiring and should be properly fixed to the appliance with a stain relief connector.

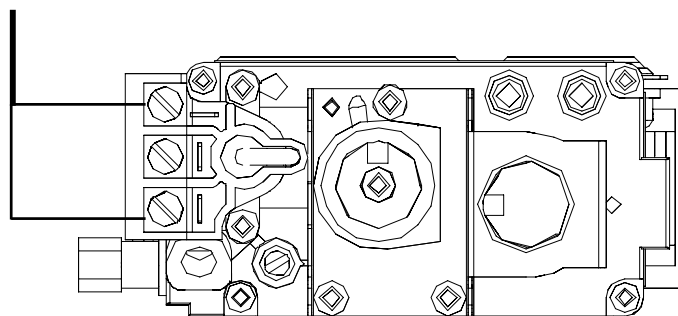
INSTALLING REMOTE THERMOSTAT OR WALL SWITCH

RECOMMENDED WIRE SIZE for thermostat installation: 18 gauge, 2 wire solid core, Low Voltage wire. (Bell wire)

1. Install the 18 Gauge wire supplied to the two terminals on the thermostat or remote wall switch.
2. Connect the other end of the wire to the gas valve using the two outside terminals on the front of the gas valve. Use the terminals marked (TP/TH and TH) as shown below.

RECOMMENDED MAXIMUM LEAD LENGTH (TWO WIRE) WHEN USING WALL THERMOSTAT

WIRE SIZE	MAXIMUM LENGTH
14 GAUGE	100 FEET
16 GAUGE	64 FEET
18 GAUGE	40 FEET
20 GAUGE	18 FEET



FUEL CONVERSION

“Warning” This conversion kit shall be installed by a qualified service technician in accordance with the manufacturer’s instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, explosion or CO poisoning may result. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper or complete until the operation of the converted appliance is checked as specified in the owner’s conversion kit.

Please read and follow these instructions. Also please read the instruction guide lines provided by S.I.T on how to remove and install the HI-LOW regulator.

STEP 1. Carefully inspect all parts supplied with this conversion kit.

STEP 2. Shut the gas off the main gas line to the appliance.

STEP 3. Open the door by undoing the three screws on the bottom of the door, pull door towards you then lift up and out. Remove the logs and the burner tray from the unit, this will expose the main burner orifices and the pilot assembly

STEP 4. Change the regulator on the front of the gas valve. (Follow the instructions provided by S.I.T)

STEP 5. To change the pilot orifice: First, remove the two (2) T-20 Torx screws that hold the pilot assembly to the burner tray. Lift the pilot assembly from the burner tray. Using a 10 mm wrench, disconnect the pilot line from the pilot assembly and remove the pilot injector. Install the new pilot injector.

(BE CAREFUL WHEN TIGHTENING THE PILOT FITTING, YOU COULD BREAK THE CERAMIC IGNITER ELECTRODE).

STEP 6. Re-install the pilot assembly in the reverse order of STEP 5.

STEP 7. Remove the two (2) main burner orifices using a 1/2” deep socket

STEP 8. Install the two (2) new orifices supplied making sure that the orifices are in the correct location. Be sure to put a bead of pipe thread sealant or approved Teflon tape on the orifices before installing them into the burner assembly.

STEP 9. Reinstall the burner tray, log set and door.

STEP 10. Turn the gas line to the unit back on. Do a leak check using a soap and water solution or an approved manner on the gas supply line and the pilot tubing.

STEP 11. Re-light the appliance to insure proper operation and proper flame appearance. Be sure to adjust the venturi setting to achieve an efficient flame in the fireplace.

STEP 12. MAKE SURE that the sticker provided by S.I.T is installed to signify that this valve has been converted to a different type of fuel. Also make sure that the rating plate has a conversion label provided, to show that this unit has been converted to a different fuel type.

A VISUAL CHECK OF THE REGULATOR KNOB IS NECESSARY TO DETERMINE WHETHER OR NOT THE REGULATOR IS THE CORRECT PART. A 50% TURN DOWN REGULATOR WILL HAVE ONLY ONE CORNER ON THE KNOB.

CONVERSION KIT PARTS LIST

1 50% turn down HI-LOW Regulator w 3 T-20 Torx screws 1 pilot injector 2 Main orifices 1 Pilot assembly mounting gasket	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Pilot Orifice.</td> <td style="width: 20%;">.51 mm</td> <td style="width: 50%;">.35 mm</td> </tr> <tr> <td>Burner Orifice.</td> <td>Front #48</td> <td>Front #56</td> </tr> <tr> <td></td> <td>Rear #50</td> <td>Rear #57</td> </tr> <tr> <td>Venturi Settings</td> <td>Front 1/16”</td> <td>Front 1/4”</td> </tr> <tr> <td></td> <td>Rear 1/16”</td> <td>Rear 1/4”</td> </tr> </table>	Pilot Orifice.	.51 mm	.35 mm	Burner Orifice.	Front #48	Front #56		Rear #50	Rear #57	Venturi Settings	Front 1/16”	Front 1/4”		Rear 1/16”	Rear 1/4”
Pilot Orifice.	.51 mm	.35 mm														
Burner Orifice.	Front #48	Front #56														
	Rear #50	Rear #57														
Venturi Settings	Front 1/16”	Front 1/4”														
	Rear 1/16”	Rear 1/4”														

NATURAL GAS PROPANE

WARRANTY

Sherwood Industries Ltd. offers a *Lifetime Warranty on this gas product. The lifetime warranty covers the appliance for a period of seven years from the date of installation. This warranty applies only to the original owner in the original location

Covered under the lifetime warranty are, Surround Panels and Chassis and Heat Exchanger. These steel components are covered against manufacturer's defects for 5 years and labour for the first year. (A) The following exclusions apply:- over-firing due to incorrect setup or tampering, damage caused by incorrect installation, usage or abuse. The unit must be properly installed by a qualified technician or installer, and must meet all local and national gas and building code requirements.

We also cover against manufacture defects under our lifetime warranty. The following components,

Gold Plating, Log Set, Burners and Glass (A) The following exclusions apply: Gold plating- Damage caused by scratching, marring, chemicals, fingerprints, abrasive cleaners or discoloration with age. Glass- use of harsh or abrasive cleaners, striking the glass or surface contaminates. Logset- Damage caused by incorrect handling or misuse. Burners- damage caused by improper or continuous operation under incorrect conditions.

Sherwood Industries Ltd. offers a 2-year warranty on all the Electrical Components and Gas Components against manufacturing defects. Paint is covered against flaking. This offer includes parts and labor for 1 year and for parts only thereafter.

The paint on the Metal Brick Liner may peel. This is due to the extreme conditions applied to the paint and is no way covered under warranty.

Your dealer shall make all claims under this warranty in writing.

WHEN FILING A WARRANTY CLAIM PLEASE COMPLETE THE FOLLOWING INFORMATION ON AN OFFICIAL WARRANTY CLAIM FORM:

To the Dealer

- Name, address and telephone number of purchaser and date of purchase.
- Date of installation. Name of installer and dealer. Serial number of the appliance. Nature of complaint, defects or malfunction, description and part # of any parts replaced.

To the Distributor

- Sign and verify that work and information are correct.

This warranty covers defects in materials and workmanship only if the product has been installed according to the manual's instructions. If the product is damaged or broken as a result of misuse or mishandling the warranty does not apply. The warranty does not cover removal and re-installation costs.

Sherwood Industries Ltd. reserves the right to repair or to replace the defective product. The shipping costs are to be paid by the consumer. All warranties by the manufacture are set forth herein and no claim shall be made against the manufacturer on any oral warranty or representation.

Sherwood Industries Ltd. and its employees or representatives will not assume any damages, either directly or indirectly caused by improper usage, operation, installation, servicing or maintenance of this appliance.

Sherwood Industries Ltd. reserves the right to make changes without notice. Please complete and mail the warranty registration card and have the installer fill in the installation data sheet in the back of the manual for warranty and future reference.

INSTALLATION DATA SHEET

The installer for warranty purposes and future reference must record the following information. Please keep this information for your records.

Model: EG 33 Zero Clearance Direct Vent

Name of Owner: _____

Address: _____

Phone: _____

Name of Dealer: _____

Address: _____

Phone: _____

- Model : _____
- Serial Number: _____
- Date of Purchase: _____ / _____ / _____
- Date of Installation: _____ / _____ / _____
- ___ Natural Gas (Nat.), ___ Propane (LPG)
- Inlet Gas Supply Pressure: _____ in.w.c.

If the orifices were changed by the installer.

- Front Burner Orifice # _____ ,
- Back Burner Orifice # _____ .
- Pilot Orifice # _____ or _____ in.Dia.

Installer's Signature: _____

Name of Installer: _____

Address: _____

Phone : _____

**E-MAIL ADDRESS (envirofire@home.com)
WEB SITE ADDRESS (www.enviro-fire.com)**

**MANUFACTURED BY:
SHERWOOD INDUSTRIES, 6782 OLDFIELD ROAD., SAANICHTON, B.C., CANADA V8M 2A3**

01/31/06